

REMARKS

Claims 1-27 and 32-38 were pending when the present Office Action was mailed on July 23, 2010, of which claims 6-27, 32-34, 37 and 38 have been withdrawn from consideration. In this response, claims 1, 4, and 35-36 have been amended to clarify certain features of these claims and to expedite prosecution of this application; the foregoing amendments are made without prejudice to pursuing these claims in unamended or other forms in a continuation or other application. No claims have been canceled in this response and no claims have been added in this response. Accordingly, claims 1-5 and 35-36 are currently pending.

In the Office Action dated July 23, 2010, claims 1-27 and 32-38 were rejected. More specifically, the status of the application in light of this Office Action is as follows:

- (A) Claims 1, 4 and 35-36 were objected to because of informalities;
- (B) Claims 1-5 and 35-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Paradiso et al. (USPN 6,404,340) in view of Rodgers et al. (USPN 6,340,932);

As a preliminary matter, applicants respectfully request an Examiner's Interview prior to any substantive action or Office Action in the pending case. Further to this request, applicants submit an Applicant Initiated Examiner Interview Request Form requesting a telephonic interview at 10AM PST//1PM EST on Friday, February 18, 2011. Applicants' representative will follow up with the Examiner to confirm his availability.

A. Response to the Objections to Claims 1, 4 and 35-36

Claims 1, 4 and 35-36 were objected to due to informalities. Claims 1, 4 and 35-36 have been amended for purposes of correcting informalities and not for purposes of overcoming the prior art. Accordingly, applicants respectfully request these objections be withdrawn.

B. Response to the Section 103(a) Rejection of Claims 1-5 and 35-36

Claims 1-5 and 35-36 stand rejected under 35 U.S.C. § 103(a) as being obvious over Paradiso in view of Rodgers. Applicants respectfully submit that each of the pending claims includes specific features that are neither disclosed nor suggested by the Paradiso or the Rodgers reference. For example, independent claims 1 and 35 recite a method of locating a marker that includes, *inter alia*, identifying a marker resonant frequency based upon multiple sets of plurality of inputs, adjusting an excitation source to provide further excitation at the marker resonant frequency and receiving a resonance set of plurality of inputs indicative of a sensed magnetic flux induced by said marker in response to said excitation at said marker resonant frequency. As disclosed in the specification, manufacturing variances interfere with providing markers having an accurately predictable resonant frequency (Specification, page 15). As claimed, the tunable receiver identifies the resonant frequency of the marker and provides that information to the excitation source. The excitation source can then provide an exciting pulse at a frequency that is closely matched to the resonant frequency of the marker. In this manner, better performance can be obtained by the system. Several methods for identifying a marker resonant frequency are disclosed in the specification, including for example, an iterative manner, by choosing a ΔF frequency spacing as a fixed percentage of bandwidth, interpolating a resultant response, and by using a sparse set of excitation frequencies to search a frequency range. (Specification, page 15-17)

Furthermore, the receiver is adaptable to work in coordination with the excitation source to tune the system to the specific characteristics of the marker. (Specification, page 15) Specifically, the excitation source has an adjustable frequency that can be tuned in accordance with analysis made by the receiver. (Specification, page 15) Thus, the determination of the resonant frequency of the marker may be done in an iterative manner to further include adjusting said excitation source to provide further excitation at said marker resonant frequency. (Specification, page 15)

Paradiso discloses a device and method capable of magnetic coupling which is tracked using one or more pairs of coils oriented such that, when the coils are energized, a substantially uniform magnetic field is created in a region between the coils. (Col. 1, Ins. 55-58) The field magnetically couples into any appropriately aligned structures located in the region between the coils. (Col. 1, Ins. 58-60) As such, Paradiso discloses a continuous wave excitation of constant amplitude and frequency.

Rodgers is directed to a carrier with an antenna for radio frequency identification. The Office Action has failed to articulate a rational apparent reason to redesign Paradiso with Rodgers to arrive at the features of the claimed invention. Instead, the Office Action includes the conclusory statement that: "because both Paradiso and Rodgers teach the detection and tracking of multiple circuits simultaneously, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tuning marker Paradiso in view of the robust RF device resonant frequency identification scheme of Rodgers." (Office Action, page 5) Applicants respectfully disagree with this conclusory statement for combining these references to render the claimed invention obvious and more specifically disagrees with the Office Action's characterization of the teachings of Paradiso and Rodgers.

As described previously, Paradiso teaches a frequency sweeping device which is not adjustable. For example, Paradiso teaches an oscillator sweeping from 40 kHz to 400 kHz at a repetition rate of 30 Hz and fails to teach or disclose adjusting the excitation source to provide further excitation at the marker resonant frequency as disclosed and claimed in the pending application. (Paradiso, col. 4, Ins 51-55) Furthermore, although the Office Action asserts Paradiso applies "an excitation at one of a set of frequencies to the marker....," applicants respectfully maintain that this is a misstatement of what is disclosed in Paradiso. Paradiso discloses only a swept-frequency excitation scheme and never an excitation at a single frequency (Figure 3B; col 3, 51-54; col 5, 25-30). Furthermore, Paradiso discloses coils which serve as both excitation and sense coils (applicants note that Paradiso does not disclose the invention

in these terms, these terms represent an application of applicants' terminology), but does not disclose separate excitation and sensing subsystems.

Furthermore, the approach disclosed and taught relies on this common feature and would cease to function if the excitation and sensing were split, therefore, the principle of operation of Paradiso would inappropriately be modified. According to the MPEP, "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." (MPEP 2143.01(VI), The Proposed Modification Cannot Change the Principle of Operation of a Reference, *citing In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).)

In contrast to Paradiso, the pending application teaches and claims a method for determining a marker resonant frequency which includes a receiver tunable to a resonator frequency. (Specification, [0076]) More specifically, with regard to box 709 of Figure 7 of the pending application, the receiver 208 is adaptable to work in coordination with the excitation source to tune the system 100 to the specific characteristics of the marker. (Specification, [0077]) In particular, the excitation source 202 has an adjustable frequency that can be tuned in accordance with analysis made by the receiver 208. (Specification, [0077]) Furthermore, none of the secondary references correct the noted deficiencies of Paradiso. For example, the secondary reference cited in the Office Action fails to teach or disclose adjusting the excitation source to provide further excitation at the marker resonant frequency. Additionally, Rodgers does not teach or disclose receiving a resonance set of plurality of inputs indicative of a sensed magnetic flux induced by the marker in response to the excitation at the marker resonant frequency. Claims 1-5 and 35-36 are patentable over Paradiso and Rodgers in view of Rodgers under Section 102(b) and also under Section 103(a) because these references fail to teach or disclose a method for determining the resonant frequency of a marker by utilizing a resonant frequency, adjusting an excitation

source and/or ring time control processor. Accordingly, applicants respectfully request that the rejection of all claims under Section 102 and Section 103 be withdrawn.

B. Dayco/McKesson Disclosure

In accordance with the undersigned's current understanding of the obligations imposed by *Dayco Products, Inc. v. Total Containment, Inc.*, 329 F.3d 1358 (Fed. Cir. 2003) and *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.*, 487 F.3d 897 (Fed. Cir. 2007), the file histories of the following applications may contain information material to one or more of the pending claims. In assessing the patentability of the pending claims, the Examiner is respectfully requested to review the file history of each of the listed applications, determine whether such applications have "similar subject matter" and, if so, consider each substantive Office Communication and Office Action, including each reference on which a rejection is based, and each paper submitted by applicant therein. If the Examiner requires any further information in this respect, please let the undersigned know.

- a. Application Serial No. 10/749,478, filed on December 31, 2003;
- b. Application Serial No. 10/750,456, filed December 31, 2003;
- c. Application Serial No. 10/750,164, filed December 31, 2003; and
- c. Application Serial No. 10/749,960, filed December 31, 2003, now US Patent No. 6,977,504.

C. Conclusion

In view of the foregoing, the pending claims, comply with 35 U.S.C. § 112 and are patentable over the prior art. Applicant respectfully requests reconsideration of the application and a mailing of a Notice of Allowance. If the Examiner has any questions

or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-6088.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 341148021US from which the undersigned is authorized to draw.

Dated: 1.24.11

Respectfully submitted,

By

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